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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,464	07/21/2003	Chikaomi Mori	030804	4537

23850 7590 11/29/2004

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EXAMINER

HOLLINGTON, JERMELE M

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,464

Applicant(s)

MORI, CHIKAOMI

Examiner

Jermele M. Hollington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sept. 7, 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3 and 8 is/are rejected.
- 7) ☒ Claim(s) 4-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments with respect to claims 2-7 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2-3 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hagihara (5825192).

Regarding claim 8, Hagihara discloses [see Fig. 2] a probe card (probe card device 30) used for performing an electrical test of a subject (semiconductor chips 12b) to be tested that is a semiconductor device (wafer 12) or the like and comprising: a substrate body (combination of printed wiring substrate 48 and push mechanism 39); a contactor unit (probe card 32), one surface oriented to face one surface of the substrate body (48) and the other surface of the contactor unit (32) is provided with a plurality of contactors (bump electrodes 33) capable of electrical contact with electrodes (pad electrodes 12a) of the subject (12b) to be tested; an interposer (membrane 33) for establishing an electrical contact between the substrate body (39 and 48) and said contactor unit (32); supporting means (support block 31) for supporting the contactor unit (32) with elastic force; a parallelism adjusting means (bolts 52 and 53) for adjusting a degree of parallelism of the contactor unit (32), wherein a flange section (elastomer

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62) is provided at an outside section of the contactor unit (32), the supporting means (31) is configured to include a support member (support member 50) with a flange section (rod 42) provided at an inside section thereof and arranged to face the flange section (62) of the contactor unit (32) in a vertical direction and include a coil spring (coil spring 45 shown in Fig. 4) interposed between said flange section (42) of the support member (50) and said flange section (62) of the contactor unit (32).

Regarding claim 2, Hagihara discloses a first reinforcing plate (tension imparting block 51) that comes in contact with the substrate body (39) is arranged at the other side [top surface] of the substrate body (39).

Regarding claim 3, Hagihara discloses the support member (50) is attached to the first reinforcing plate (51) via a spacer (rod 42) inserted into a borehole formed on the substrate body (39).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wood et al (5905382 and 6737882), and Kohno et al (6566150), disclose a method and apparatus for a contactor and semiconductor device.

5. Claims 4-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: regarding claims 4, 5 and 7, the instant claims are deemed to be directed to a nonobvious improvement over the admitted prior art of Fig. 4. The improvement comprises heat-conductive

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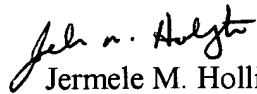
sheet provided between different components to absorb a temperature difference of each component to avoid a warp of the substrate body during testing with high temperature.

Regarding claim 6, the primary reason for the allowance of the claim is due to the fact that probe card has a second reinforcing plate with a screw threadly secured to the plate so as to cause its leading edge to be in contact with a position of the substrate body.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (571) 272-1960. The examiner can normally be reached on M-F (9:00-4:30 EST) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on (517) 272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jermele M. Hollington
Patent Examiner
Art Unit 2829

JMH

November 20, 2004